UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,699	11/29/2000	David Coupe	END920000091US1	1379

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EXAMINER
SHAND, ROBERTA A

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/726,699	COUPE ET AL.
	Examiner	Art Unit
	Roberta A. Shand	2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07/11/2055</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13,15-22,24-26,28-38,40-47,49-53,55-63,65-74,76 and 77* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *49* is/are allowed.

6)☒ Claim(s) *1,3,5-13,15-22,24-26,28,30-38,40-47,50-53,55,57-63,65-74,76 and 77* is/are rejected.

7)☒ Claim(s) *4,29 and 56* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Finality has been withdrawn, and the following Rejection applies.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3.   Claims 1, 3, 5, 8-12, 28, 30, 33-37, 51, 53, 55, 57 and 60-63 are rejected under 35 U.S.C.

103(a) as being unpatentable over Pinder in view of Movshovich (U.S. 6438145 B1).

4.   Regarding claim 1, Pinder teaches (figs. 5 and 8) a method for re-mapping PID values

provided in transport packets associated with multiple transport streams to be multiplexed onto a

single shared transport channel, comprising: providing at least one PID re-map table (fig. 3,

element (304) having re-map values indexed by n possible PID values of transport packets

associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams (col. 15, lines 41-53 and fig. 8); and comparing PID values of transport packets associated with the transport stream with n possible PID values of the PID re-map table, and when the match is found, indexing the PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

5.   Pinder does not teach when a non-matching PID value is found, performing at least one of: the associated transport packet is to be discarded; or performing clock recovery on the transport stream and discarding the transport packet associated with the non-matching PID value.

6.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet when there is no PID match. It would have been obvious to one of ordinary skill in the art to adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the system.

7.   Regarding claims 3, 28 and 55, Pinder teaches (fig. 5) the transport channel couples to a transport de-multiplexor that can handle x PID values where n<= x.

8.   Regarding claims 5, 30 and 57, Pinder teaches (fig. 1) receiving the multiple transport streams from multiple network interfaces, each to receive a separate network input.

9.   Regarding claims 8, 33 and 60, Pinder teaches (fig. 3 and col. 7, lines 3-53) the multiple transport stream comprise two transport streams, and wherein the method comprises providing a

separate PID re-map table for each transport stream, and comparing PID values of the transport

packets associated with each transport stream with entries of the respective tables.

10.   Regarding claim 9, 34 and 61, Pinder teaches (col. 6, lines 61-col. 7, line 2) each

transport stream contains a real time clock reference.

11.   Regarding claim 10, 35 and 62, Pinder teaches (fig. 3) navigational table indicative of the

PID values in use by the transport streams, monitoring and adjusting the value n responsive to

changes in the navigational tables.

12.   Regarding claim 11, 36 and 63, Pinder teaches (fig. 3) synchronizing each stream to

identify packet boundaries (start indicator and discontinuity indicator).

13.   Regarding claim 12, 37 and 65 Pinder teaches (fig. 1) a live network interface.

14.   Regarding claim 26, Pinder teaches (figs. 5 and 8) a system of re-mapping PID values

provided in transport packets associated with multiple transport streams to be multiplexed onto a

single shared transport channel, comprising: means for providing at least one PID re-map table

(fig. 3, element 304) having re-map values indexed by n possible PID values of transport packets

associated with at least one transport stream of the multiple transport streams, wherein n is less

than all possible PID values of the transport packets within the multiple transport streams (col.

15, lines 41-53 and fig. 8); and means for comparing PID values of transport packets associated

with the transport stream with n possible PID values of the PID re-map table, and when the

match is found, indexing the PID re-map table using the matching PID value, generating

therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

15.   Pinder does not teach when a non-matching PID value is found, performing at least one

of: the associated transport packet is to be discarded; or performing clock recovery on the

transport stream and discarding the transport packet associated with the non-matching PID value.

16.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet

when there is no PID match. It would have been obvious to one of ordinary skill in the art to

adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the

system.

17.   Regarding claim 51, Pinder teaches (figs. 5 and 8) a system for processing transport

packets associated with multiple transport streams to be multiplexed onto a single transport de-

multiplexor, comprising: at least one PID re-map table (fig. 3, element 304) having re-map

values indexed by n possible PID values of transport packets associated with at least one

transport stream of the multiple transport streams, wherein n is less than all possible PID values

of the transport packets within the multiple transport streams; and a controller that compares PID

values of transport packets associated with the transport stream with n possible PID values of the

PID re-map table (col. 15, lines 41-53 and fig. 8), and when the match is found, indexing the PID

re-map table using the matching PID value, generating therefrom a re-map value, and replacing

the matching PID value by the re-map value (cols. 7-8).

18.   Pinder does not teach when a non-matching PID value is found, performing at least one

of: the associated transport packet is to be discarded; or performing clock recovery on the

transport stream and discarding the transport packet associated with the non-matching PID value.

19.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet

when there is no PID match. It would have been obvious to one of ordinary skill in the art to

adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the

system.

20.   Regarding claim 53, Pinder teaches (figs. 5 and 8) at least one program storage device

readable by a machine, tangibly embodying at least one program of instructions executable by

the machine to perform a method for re-mapping PID values provided in transport packets

associated with multiple transport streams to be multiplexed onto a single shared transport

channel, comprising: providing at least one PID re-map table (fig. 3, element 304) having re-map

values indexed by n possible PID values of transport packets associated with at least one

transport stream of the multiple transport streams, wherein n is less than all possible PID values

of the transport packets within the multiple transport streams; and comparing PID values of

transport packets associated with the transport stream with n possible PID values of the PID re-

map table (col. 15, lines 41-53 and fig. 8), and when the match is found, indexing the PID re-

map table using the matching PID value, generating therefrom a re-map value, and replacing the

matching PID value by the re-map value (cols. 7-8).

21.   Pinder does not teach when a non-matching PID value is found, performing at least one

of: the associated transport packet is to be discarded; or performing clock recovery on the

transport stream and discarding the transport packet associated with the non-matching PID value.

22.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet

when there is no PID match. It would have been obvious to one of ordinary skill in the art to

adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the

system.

23.   Claims 6-7, 13, 15-22, 24, 25, 31-32, 38, 40-47, 50, 52, 58-59, 66-74, 76 and 77 are

rejected under 35 U.S.C. 103(a) as being unpatentable over Pinder in view of Movshovich in

further view of Robinett (U.S. 6351471 B1).

24.   Regarding claims 6-7, 13, 31-32, 38, 58-59 and 66, Pinder teaches (fig. 5) the transport

stream retrieved from a storage device associated with a de-multiplexor.

25.   Pinder does not teach interleaved packets

26.   Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to adapt to Pinder's system

Robinett's interleaving of data to increase quality of service within the system.

27.   Regarding claim 15, Pinder teaches (figs. 5 and 8) a method for processing transport

packets associated with multiple transport streams, comprising: re-mapping

PID values, comprising: providing at least one PID re-map table (fig. 3, element (304) having re-

map values indexed by n possible PID values of transport packets associated with at least one

transport stream of the multiple transport streams, wherein n is less than all possible PID values

of the transport packets within the multiple transport streams; and comparing PID values of

transport packets associated with the transport stream with n possible PID values of the PID re-

map table (col. 15, lines 41-53 and fig. 8), and when the match is found, indexing the PID re-

map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value (cols. 7-8).

28.   Pinder does not teach when a non-matching PID value is found, performing at least one of: the associated transport packet is to be discarded; or performing clock recovery on the transport stream and discarding the transport packet associated with the non-matching PID value.

29.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet when there is no PID match. It would have been obvious to one of ordinary skill in the art to adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the system.

30.   Pinder and Movshovich do not teach interleaved packets

31.   Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder and Movshovich's system Robinett's interleaving of data to increase quality of service within the system.

32.   Regarding claims 16, 41 and 68, Pinder teaches (figs. 5) the transport stream for input into a de-multiplexor.

33.   Regarding claims 17, 42 and 69, Robinett teaches (col. 42, lines 39-59) buffering prior to interleaving.

34.   Regarding claims 18, 43 and 70, Pinder teaches (fig. 3) synchronizing each stream to

identify packet boundaries (start indicator and discontinuity indicator).

35.   Regarding claims 19, 20, 44-45 and 71-72, Pinder teaches (fig. 1) a live network interface

and input.

36.   Regarding claims 21, 46 and 73, Pinder teaches (fig. 5) a storage device (502).

37.   Regarding claims 22, 47 and 74, Pinder teaches (col. 5. lines 7-19) a set top box.

38.   Regarding claims 24 and 76, Pinder teaches (fig. 5) the transport channel couples to a

transport de-multiplexor that can handle x PID values where n<= x.

39.   Regarding claims 25, 50 and 77, Pinder teaches (fig. 3) navigational table indicative of

the PID values in use by the transport streams, monitoring and adjusting the value n responsive

to changes in the navigational tables.

40.   Regarding claim 40, Pinder teaches (figs. 5 and 8) a system for processing transport

packets associated with multiple transport streams, comprising: means for re-mapping

PID values, comprising: means for providing at least one PID re-map table (fig. 3, element (304)

having re-map values indexed by n possible PID values of transport packets associated with at

least one transport stream of the multiple transport streams, wherein n is less than all possible

PID values of the transport packets within the multiple transport streams (col. 15, lines 41-53 and

fig. 8); and means for comparing PID values of transport packets associated with the transport

stream with n possible PID values of the PID re-map table, and when the match is found,

indexing the PID re-map table using the matching PID value, generating therefrom a re-map

value, and replacing the matching PID value by the re-map value (cols. 7-8).

41.   Pinder does not teach when a non-matching PID value is found, performing at least one

of: the associated transport packet is to be discarded; or performing clock recovery on the

transport stream and discarding the transport packet associated with the non-matching PID value.

42.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet

when there is no PID match. It would have been obvious to one of ordinary skill in the art to

adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the

system.

43.   Pinder and Movshovich do not teach a means for interleaving packets

44.   Robinett teaches (col. 42, lines 39-59) means for interleaving data. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to adapt to Pinder

and Movshovich's system Robinett's interleaving of data to increase quality of service within the

system.

45.   Regarding claim 52, Pinder teaches (figs. 5 and 8) a system for processing transport

packets associated with multiple transport streams, comprising: re-mapping

PID values, comprising: providing at least one PID re-map table (fig. 3, element (304) having re-

map values indexed by n possible PID values of transport packets associated with at least one

transport stream of the multiple transport streams, wherein n is less than all possible PID values

of the transport packets within the multiple transport streams (col. 15, lines 41-53 and fig. 8); and

a controller that compares PID values of transport packets associated with the transport stream

with n possible PID values of the PID re-map table, and when the match is found, indexing the

PID re-map table using the matching PID value, generating therefrom a re-map value, and

replacing the matching PID value by the re-map value (cols. 7-8).

46.   Pinder does not teach when a non-matching PID value is found, performing at least one

of: the associated transport packet is to be discarded; or performing clock recovery on the

transport stream and discarding the transport packet associated with the non-matching PID value.

47.   Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet

when there is no PID match. It would have been obvious to one of ordinary skill in the art to

adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the

system.

48.   Pinder and Movshovich do not teach interleaved packets

49.   Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to adapt to Pinder and

Movshovich's system Robinett's interleaving of data to increase quality of service within the

system.

50.   Regarding claim 67, Pinder teaches (figs. 5 and 8) at least one program storage device

readable by a machine, tangibly embodying at least one program of instructions executable by

the machine to perform a method for re-mapping PID values provided in transport packets

associated with multiple transport streams to be multiplexed onto a single shared transport

channel, comprising: providing at least one PID re-map table (fig. 3, element 304) having re-map

values indexed by n possible PID values of transport packets associated with at least one

transport stream of the multiple transport streams, wherein n is less than all possible PID values

of the transport packets within the multiple transport streams (col. 15, lines 41-53 and fig. 8); and

comparing PID values of transport packets associated with the transport stream with n possible

PID values of the PID re-map table, and when the match is found, indexing the PID re-map table

using the matching PID value, generating therefrom a re-map value, and replacing the matching

PID value by the re-map value (cols. 7-8).

51. Pinder does not teach when a non-matching PID value is found, performing at least one

of: the associated transport packet is to be discarded; or performing clock recovery on the

transport stream and discarding the transport packet associated with the non-matching PID value.

52. Movshovich teaches (col. 10, line 58 – col. 11, line 16) discarding the transport packet

when there is no PID match. It would have been obvious to one of ordinary skill in the art to

adapt to Pinder's system Movshovich's discarding concept to ensure quality of service within the

system.

53. Pinder and Movshovich do not teach interleaved packets

54. Robinett teaches (col. 42, lines 39-59) interleaved data. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to adapt to Pinder and

Movshovich's system Robinett's interleaving of data to increase quality of service within the

system.

Allowable Subject Matter

55.   Claims 4, 29, 49 and 56, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

56.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

57.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

58.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

STEVEN NGUYEN
PRIMARY EXAMINER

Roberta A Shand
Examiner
Art Unit 2665